

Shiga Toxin-Producing *Escherichia coli* (STEC)

What is Shiga Toxin-Producing *Escherichia coli*?

Escherichia coli (also called *E. coli*) are bacteria that normally live in the intestines of humans and animals such as cows. Most strains of the *E. coli* bacteria do not cause illness. However, strains that produce toxins, referred to as Shiga toxin-producing *E. coli* (STEC), can cause serious illness. *E. coli* O157:H7 is the most common type of STEC, but other types exist.

Who gets STEC?

Anyone can get STEC, but young children and older adults are more likely to have severe illness.

How is STEC spread?

STEC has to enter the mouth to cause infection. People and animals infected with STEC shed the bacteria in their feces (stool). The feces can then contaminate surfaces, food, or water. People can become infected by touching contaminated surfaces, getting the bacteria on their hands and then putting their hands in their mouths, or by eating contaminated food or drinking contaminated water. Infected food handlers can contaminate food if they do not wash their hands properly after going to the bathroom and handle food that other people eat. The bacteria can also be spread in settings such as daycare centers, where hands contaminated while changing diapers can spread the disease.

STEC has been associated with people eating contaminated products, such as undercooked ground beef and produce (e.g., sprouts, lettuce, and spinach), or drinking unpasteurized (raw) milk or juice. It has also been associated with people swimming in water that has been contaminated with feces. Animal-to-human spread can occur by hand-to-mouth contact with contaminated surfaces or animals (e.g., at agricultural fairs, petting zoos, or farm visits).

What are the symptoms of STEC?

Some people who are exposed to STEC do not become ill. Others may develop stomach cramps and bloody diarrhea. Symptoms may also include vomiting, fever, and chills. In severe cases, the infection can damage organs, such as the kidneys.

How soon after exposure do symptoms appear?

Symptoms may appear anywhere from two to ten days after exposure, but usually appear around three to four days after exposure.

Shiga Toxin-Producing *Escherichia coli* (STEC)

January 2013 – page 2

How is STEC diagnosed?

Special laboratory testing of a stool sample is needed to confirm that a person has STEC.

What is the treatment for STEC?

Persons with diarrhea should drink plenty of liquids to prevent dehydration. Most people get well within one week without being seen by a physician, but it is important for anyone with bloody diarrhea to seek medical attention. Antibiotics or drugs that stop diarrhea (e.g., Imodium) should not be used.

How can STEC be prevented?

STEC can be prevented by taking the following precautions. Never eat rare or undercooked ground beef. Cook ground beef to an internal temperature of 160°F. Keep raw meat separate from ready-to-eat foods. Wash hands, counters, utensils, and plates after contact with raw meat. Always refrigerate meat products. Never leave raw meats at room temperature. Do not drink milk, milk products, fruit juices, or ciders that have not been pasteurized. Always wash raw fruits or vegetables before eating. Always carefully wash hands before and after preparing foods. Make sure children wash their hands carefully, especially after using the toilet or handling animals. Always carefully wash hands with soap and warm water after using the toilet or changing diapers. Do not use public swimming facilities while having diarrhea. Clean and disinfect diapering areas, toilets, potty chairs, toys, etc. at least daily and when soiled.

How long can an infected person carry STEC?

An infected person can spread the bacteria to others for as long as the bacteria remain in the stool (usually one week, but up to three weeks in children).

Should an infected person be excluded from work or school?

It is best to stay home when you have diarrhea. The health department will give advice on each situation in which the person with STEC is a food handler, health care worker, or day care worker or attendee. Some people might not be allowed to go back to day care or work until two stool specimens test negative for the bacteria.

How can I get more information about STEC?

- 1) If you have concerns about disease, contact your healthcare provider.
- 2) Call your local health department. A directory of local health departments is located at <http://www.vdh.virginia.gov/LHD/index.htm>.
- 3) Visit the Centers for Disease Control and Prevention website at <http://www.cdc.gov/ecoli/>.